degussa.

Goldschmidt Chemical

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Via Certified Mail

Document Processing Center (7407M)
Attention: TSCA § 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460-0001

RE: TSCA Section 8(e): Notification of Substantial Risk; Detection of Decamethylcyclopentasiloxane and Octamethylcyclotetrasiloxane in the tissue of fish from the Rhine River in Germany

Dear TSCA Section 8(e) Coordinator:

The following information is being provided to the Agency by Goldschmidt Chemical Corporation, a wholly-owned subsidiary of Degussa Corporation, for the Agency's consideration. Based upon the company's interpretation, this data does not meet all of the requirements for reporting as outlined in *TSCA Section 8(e); Notification of Substantial Risk; Policy Clarification and Reporting Guidance (Federal Register: June 3, 2003 (Volume 68, Number 106))* for substantial risks related to non-emergency situations involving environmental contamination and environmental effects. Furthermore, the company has not made a determination at this time that any risk of injury to human health or the environment is presented by these findings. However, the company believes the fish data may constitute new information about environmental residues that could be of interest to the Agency.

Chemical Substances:

CAS Registry Number: 556-67-2	Octamethylcyclotetrasiloxane (D4)
CAS Registry Number: 541-02-6	Decamethylcyclopentasiloxane (D5)

Summary of the On-going Study:

The analytical laboratories of Goldschmidt GmbH (Essen, Germany) initiated a project to develop an analytical method to detect various volatile methylated silicones (VMS) in the environment, with an emphasis on fish. During this method development several species of fish were collected from the Rhine River in Germany near the Dutch border. One specimen of Danish salmon was also obtained from an unspecified location (outside of Germany). The detection limit of the method is estimated to be 0.03 mg/kg and the quantification limit is estimated to be 0.1 mg/kg. Both D4 and D5 were detected in fish collected from the Rhine River.

It is important to note that this testing was not done as part of an environmental monitoring study nor was it done according to Good Laboratory Practices (GLP) with respect to sample collection and preparation. The fish were obtained solely for analytical method development. Although the company believes the method to be reliable for detecting VMS, it has not been independently validated and is still under development.

Results to date:

The objective of the study was to develop an analytical method to detect various volatile methylated silicones (VMS) in the environment, with an emphasis on fish. During this method development several species of fish were collected from the Rhine River in Germany near the Dutch border. One specimen of Danish salmon was also obtained from an unspecified location (outside of Germany). As shown in the table below, detectable amounts of both D4 and D5 were discovered in all fish collected from the Rhine River. The detection limit of the method is estimated to be 0.03 mg/kg and the quantification limit is estimated to be 0.1 mg/kg. D4 and D5 were not detected in the salmon.

Test Specimen*	Weight	Concentration Detected	
		D4 (mg/kg)	D5 (mg/kg)
Rotauge: *(roach) (Rutilus rutilus)*	1170 g	0.17 mg/kg	1.0 mg/kg
Brasse/Aland No. 1: *(bream/ide)*	1660 g	0.1 mg/kg	0.7 mg/kg
Brasse/Aland No. 2 *(Leuciscus idus L.)*	1940 g	0.1 mg/kg	0.15 mg/kg
Eel No. 2:	270 g	0.4 mg/kg	1.6 mg/kg
Eel No. 2 liver		0.1 mg/kg	0.15 mg/kg
Eel No. 1	360 g	0.9 mg/kg	2.6 mg/kg
Eel No. 1 liver		0.1 mg/kg	0.18 mg/kg
Eel No. 1 skin (predominantly)		0.2 mg/kg	0.7 mg/kg
Eel No. 1 fatty tissue (predominantly)		1.0 mg/kg	2.5 mg/kg
Eel No. 1 muscle tissue (predominantly)		0.7 mg/kg	2.0 mg/kg
Danish salmon		<0.1 mg/kg	< 0.1 mg/kg
*Unless otherwise specified in the table, samples were taken from the whole fish and included the skin.			

In that this effort is part of an internal company project only, a report will not be issued upon completion of the method development work.

Actions:

Goldschmidt Chemical Corporation, a wholly-owned subsidiary of Degussa Corporation, will:

- Continue to develop this analytical method to detect various volatile methylated silicones (VMS) in the environment, and,
- As a member of the Global Silicones Council, continue to participate in an on-going project to develop analytical methods for several materials including VMS with the intent to utilize these methods in support of an environmental monitoring program.

The company will notify EPA of any further relevant information that may be developed concerning these materials. If you have any questions concerning this study, please contact me at 804-541-8658 or at the address provided herein.

Sincerely,

Russell B. Mait
Director,
Environmental, Health, Safety, and Quality